

RE: oil and gas hazard screen and monitoring

Elaine Lai to: colborn

03/23/2011 10:58 AM

From: Elaine Lai/R8/USEPA/US

To: colborn@tds.net

Theo, any additional comments you might have on the following. I know we talked about this over the phone a month or so ago, and I am capturing the notes I took from our conversation here as to what constituents you believe will be important to continue monitoring for. I just wanted to make sure there was nothing else that you think will be important for us to ensure we maintain some level of monitoring for, whether as a monitoring requirement (potentially monthly) or a once a permit cycle hazard screen. Any thoughts you have on this before 9am next Monday would be great (we will meet to discuss this internally soon after that)

NOTES from call with you a month or so on constituents you think some level of monitoring should continue:
Barium - to give weight to material - from original drilling fluids left behind...as well as in hydraulic fracturing....

Molybdenum - coal usually contaminated with Molybdenum -

cadmium and chromium - used in products, cadmium, chromium, copper and lead found in pits. in fluids - found in nm, old wells they were going to shut down.

silver also being found in pits and cyanide being found in pits

accrolein - being used in one product (frac fluid, is a biocide)

acrylonitrile - being found in drinking water in Pennsylvania from natural gas

methylene chloride - being found in pits. not used in fracking fluids or drilling fluids, but sits around on pads in 55 gal drums. pure methylene chloride in drums to clean fracking tanks and clean up oily stuffs. finding it in air. evaporates very readily.

22-25v being found in pits

9a pentachlorophenol and 10a phenol - found in pits

6b benzo alpha pyrene

21b 1,3, dichlorobenzene

22b 1,4 dichlorobenzene

39b naphthalene (finding it in air and water samples)

46b 1,2,4 trichlorobenzene

----- Forwarded by Elaine Lai/R8/USEPA/US on 03/23/2011 10:55 AM -----

From: Elaine Lai/R8/USEPA/US

To: Dan Wall/R8/USEPA/US@EPA

Cc: Tricia Pfeiffer/R8/USEPA/US@EPA, Gregory Oberley/R8/USEPA/US@EPA, Nathan Wiser/R8/USEPA/US@EPA

Date: 03/23/2011 10:54 AM

Subject: hazard screen and monitoring

Dan, we are meeting next week to discuss what items we might maintain in the hazard screen and which items we might discard from further monitoring. Also, we are going to discuss if other items need to be included in the hazard screen that we might be missing at this point. In short, items we ask for more monitoring (or to be included in a hazard screen) must meet the following criteria:

- 1) must have EPA approved standard analytical method
- 2) must be linked to either water quality standards, priority pollutant list, or is listed in form 2C (the document I brought you a hard copy of last week with a few hundred pollutants)

Based on email that I sent where the facility provided information and CAS numbers for what was being used in their fracturing and/or maintenance activities (I will resend this), what items do you feel should be critical for us to maintain some level of monitoring for?

Thanks for any thoughts here -
Elaine



Pollutants_Form_2C.pdf

Below is what is currently included in the hazard screen; also I am attaching form 2C.

Parameter	Required Detection Limits and Required Units
Arsenic, Total	1 µg/l
Aluminum, Total Recoverable	50 µg/l
Cadmium, Total Recoverable	5 µg/l
Chromium, Total Recoverable	5 µg/l
Chlorides	5 mg/l
Copper, Total Recoverable	5 µg/l
Iron, Total Recoverable	50 µg/l
Lead, Total Recoverable	2 µg/l
Manganese, Total Recoverable	50 µg/l
Mercury, Total Recoverable	0.001 µg/l
Nickel, Total Recoverable	5 µg/l
Radium 226, Total Recoverable	0.2 pCi/l
Selenium, Total Recoverable	1 µg/l
Silver, Total Recoverable	5 µg/l
Sulfide/Hydrogen Sulfide (S=, HS-)	100 µg/l
Zinc, Total Recoverable	5 µg/l
Hardness, Total	10 mg/l as CaCO ₃
Uranium, Total Recoverable	5 µg/l
Gross Alpha and Beta Radiation	0.2 pCi/l

Dissolved Oxygen	1 mg/l
Chemical Oxygen Demand	3 mg/l